But even in those cases in which death occurs after the introduction of both substances, the effects of the Calabar bean are much less marked.

These results must be regarded as very important. Several cases are now on record where ships coming from Africa have discharged Calabar beans on the shore, and which have been eaten by children with more or less poisonous effects. In such cases, the administration of chloral hydrate should at once be resorted to. In Africa, fatal doses are designedly given by the ignorant natives as a test of guilt or innocence; and it will be well to remember that there it may not unfrequently occur that, as civilization opens up the country to our missionaries and medical men, life may, in this way, not unfrequently be saved.—*Ibid.*, Oct. 17.

IV. Antagonism between *hydrochlorate and meconate of morphia and Calabar bean.*—The conclusion to be drawn from these experiments is undoubtedly that meconate and hydrochlorate of morphia are in no way antagonistic to extract of Calabar bean.—*Ibid.*, Oct. 24.

V. *Antagonism between sulphate of atropia and meconate of morphia.*—The inferences drawn from the experiments on rabbits are :—

1. Sulphate of atropia is physiologically antagonistic to meconate of morphia within a limited area.
2. Meconate of morphia does not act beneficially after a large dose of sulphate of atropia, for in these cases the tendency to death is greater than if a large dose of either substance had been given alone.
3. Meconate of morphia is not specifically antagonistic to the action of sulphate of atropia on the vaso-inhibitory nerves of the heart; and
4. The beneficial action of sulphate of atropia after the administration of large doses of meconate of morphia is probably due to the action sulphate of atropia exercises on the bloodvessels. It causes contraction of these, and thus reduces the risk of death from cerebral or spinal congestion, as is known to occur after the introduction of fatal doses of meconate of morphia. It may also assist up to a certain point, not precisely fixed in these experiments, by stimulating the action of the heart through the sympathetic, and obviating the tendency to death from deficient respiration observed after large doses of morphia.—*Ibid.*, Oct. 31.

From experiments on dogs it appears that in them sulphate of atropia modifies the symptoms of poisoning by meconate of morphia, diminishes their intensity, and may even save life after a fatal dose of the latter. It is therefore decidedly antagonistic, but within a limited area. In man, sulphate of atropia would be too dangerous and uncertain a remedy to depend on in cases of poisoning by opium or any of its salts, but where the heart's action is greatly diminished it is directly indicated.

MEDICAL PATHOLOGY AND THERAPEUTICS, AND PRACTICAL MEDICINE.

19. *Pathology of the Blood.*—M. Laptschinsky, of St. Petersburg, contributes a paper to the *Centralblatt* on the microscopic changes undergone by the blood in various diseases. He finds that in various diseases in which marked febrile symptoms are present, the microscopic aspect of the blood is essentially different from that of health. The changes consist in the blood-corpuscles not running into regularly formed rouleaux, but accumulating in heaps or clumps of various size and shape. The individual blood-corpuscles frequently appear swollen and cloudy, and their contours less distinct than natural. Small corpuscles, one-third of the normal size, are often met with, some of which exhibit a more intense colour than natural, whilst others are completely pale. In the interspaces of the clumps of red corpuscles, great numbers of white corpuscles may be seen, often coalescing to form groups of from 3 to 8. In typhus he counted from 60 to 80, and more, in one field of

vision; in cholera from 110 to 130. Careful enumeration of the relative numbers of white and red corpuscles, four days after death in the above cases, showed that there was 1 white to 60 red corpuscles in the case of typhus, and 1 white to 23 coloured in the case of cholera. In a very anæmic woman, suffering from suppuration in the knee-joint, the proportion of the white rose to 1 to 13 red. The white corpuscles in these cases presented unusually active and extensive amœboid movements. The nuclei of the colourless corpuscles took a part in the amœboid movements, and could be seen altering their position and form in the interior of the white corpuscles. The thorn-apple or horse-chestnut-like form of the red corpuscles he did not find to be unusually frequent. He found, however, large quantities of granular or detritus-like material in the blood of febrile, but not much in the blood of cachectic and anæmic patients. From his enumerations he feels satisfied that in febrile diseases, and in Bright's disease, the conversion or development of white corpuscles into red is either materially retarded or is entirely arrested.—*Lancet*, Oct. 31, 1874.

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20. *Certain Types of Disease included under the Term of Purpura Hæmorrhagica.*—Dr. RICHARDSON read before the Medical Society of London, Nov. 9th, a practical paper on this subject. He commenced by indicating that in the progress of medical science and art it had often happened that one or more distinct diseases had been described under a single generic appellation; this particularly applied to the term purpura hæmorrhagica. He defined three forms of purpuric disease, each having a distinct pathology, etiology, diagnosis, prognosis, and treatment. These he called (*a*) aqueous purpura, (*b*) saline purpura, (*c*) vascular purpura. Aqueous purpura was so named because in it the water of the blood is in excess, and the colloidal and crystalloidal parts are relatively decreased; there is no evidence that the actual quantity of fibrine is reduced, but it is distributed through too large a volume of water. This type of purpura has been studied by the synthetical method. The origin of it was traced to hereditary causes mainly, but it may arise from mental shock. Two illustrative cases were given. In saline purpura the blood is surcharged with some saline soluble substance by which the plastic colloidal fibrine is held in undue solution. The synthesis of this type was also explained. The disease is not hereditary, but is induced by some error of diet or other cause that increases the solubility of the fibrine. The author added he had seen it induced by the excessive use of chloral. Passive exudations from vascular parts are characteristic of this type. In vascular purpura the blood is not modified at all, but owing to some defect in the vessels of the minute circulation, they allow the blood to escape if subjected to any blow, strain, or pressure; this may be due to paralysis of the vessel, but the author is rather inclined to attribute it to some structural modification of the vessels themselves. The diagnosis of these three forms was minutely described, the different characters of the eruptions being defined with special care. The author also remarked that these three types may be combined, and concluded his paper by a review of the different modes of treatment required. A special point was made of the best method of arresting the hemorrhage, and Dr. Richardson dwelt on the importance of paying attention to general as well as to local measures. For the former he recommended the giving of suitable food and of the mineral acids; for the latter, firm pressure and a styptic, though he strongly condemned caustic styptics. He also pointed out the value of turpentine in the vascular variety. In the discussion which followed, the President asked how syphilitic purpura should be classed? Signor Martenoli said a few words about marsh miasm. Dr. Daldy confirmed the preceding speaker's remarks, and also said there was always enlarged spleen in these cases. Dr. Hare said he always examined the spleen in such cases, but mentioned a fatal case in which purpura was the real cause of death, there being no enlargement of the spleen. Dr. Haviland Hall mentioned a fatal case of scarlet fever, complicated with purpura hæmorrhagica, in which death resulted from hemorrhage from the internal carotid. Dr. Cleveland related a fatal case of malignant smallpox complicated with very acute purpura. He had found turpentine and acetate of lead of great value. Mr. Braine recorded two cases of purpura following the use of chloral on the